

Additional file 4 Complete species list of all vegetation identified in the understory vegetation plots sampled in 2016 on the Taylor Complex fires, Alaska, USA, of 2004. N/A = not applicable.

Scientific name	USDA code	Common name	Sites present (%)	Family	Life cycle	Functional type
<i>Achillea millefolium</i> L. var. <i>borealis</i> (Bong.) Farw.	ACMIB	boreal yarrow	3	Asteraceae	Perennial	Forb
<i>Achillea sibirica</i> Ledeb.	ACSI	Siberian yarrow	3	Asteraceae	Perennial	Forb
<i>Alnus</i> Mill.	ALNUS	alder	3	Betulaceae	Perennial	Shrub, tree
<i>Alnus viridis</i> (Chaix) DC. ssp. <i>crispa</i> (Aiton) Turrill	ALVIC	mountain alder	6	Betulaceae	Perennial	Shrub, tree
<i>Alnus viridis</i> (Chaix) DC. ssp. <i>sinuata</i> (Regel) Á. Löve & D. Löve	ALVIS	Sitka alder	13	Betulaceae	Perennial	Shrub, tree
<i>Andromeda polifolia</i> L.	ANPO	bog rosemary	9	Ericaceae	Perennial	Shrub
<i>Anemone multifida</i> Poir.	ANMU	Pacific anemone	3	Ranunculaceae	Perennial	Forb
<i>Arctostaphylos rubra</i> (Rehder & Wilson) Fernald	ARRU	red fruit bearberry	25	Ericaceae	Perennial	Shrub
<i>Arctostaphylos uva-ursi</i> (L.) Spreng.	ARUV	kinnikinnick	19	Ericaceae	Perennial	Shrub
<i>Artemisia tilesii</i> Ledeb.	ARTI	Tilesius' wormwood	3	Asteraceae	Perennial	Forb
<i>Aster</i> L.	ASTER	aster	3	Asteraceae	N/A	Forb
<i>Astragalus</i> L.	ASTRA	milkvetch	3	Fabaceae	N/A	Forb
<i>Aulacomnium</i> Schwägr.	AULAC2	aulacomnium moss	31	Aulacomniaceae	Perennial	Moss
<i>Barbula</i> Hedw.	BARBU2	barbula moss	3	Pottiaceae	Perennial	Moss
<i>Betula glandulosa</i> Michx.	B EGL	resin birch	41	Betulaceae	Perennial	Shrub
<i>Betula neoalaskana</i> Sarg.	BENE4	paper birch	44	Betulaceae	Perennial	Tree
<i>Betula occidentalis</i> Hook.	BEOC2	water birch	3	Betulaceae	Perennial	Tree
<i>Calamagrostis canadensis</i> (Michx.) P. Beauv.	CACA4	bluejoint	34	Poaceae	Perennial	Graminoid
<i>Carex</i> L.	CAREX	sedge	56	Cyperaceae	Perennial	Graminoid
<i>Carex bigelowii</i> Torr. ex Schewin.	CABI5	Bigelow's sedge	6	Cyperaceae	Perennial	Graminoid
<i>Cerastium beeringianum</i> ssp. <i>beeringianum</i> Cham. & Schltdl.	CEBEB4	Bering chickweed	3	Caryophyllaceae	Perennial	Forb
<i>Chamaedaphne calyculata</i> (L.) Moench	CHCA2	leatherleaf	6	Ericaceae	Perennial	Shrub
<i>Chamerion angustifolium</i> (L.) Holub	CHAN9	fireweed	78	Onagraceae	Perennial	Forb
<i>Cladonia</i> P. Browne	CLADO3	reindeer lichen	88	Cladoniaceae	N/A	Lichen
<i>Cnidium cnidiifolium</i> (Turcz.) Schischkin	CNCN	Jakutsk snowparsley	3	Apiaceae	Perennial	Forb
<i>Dasiphora fruticosa</i> (L.) Rydb.	DAFR6	shrubby cinquefoil	13	Rosaceae	Perennial	Shrub
<i>Dicranum</i> Hedw.	DICRA8	dicranum moss	69	Dicranaceae	Perennial	Moss
<i>Drepanocladus</i> (Müll. Hal.) G. Roth	DREPA3	drepanocladus moss	3	Amblystegiaceae	Perennial	Moss
<i>Elymus</i> L.	ELYMU	wildrye	3	Poaceae	Perennial	Graminoid
<i>Empetrum nigrum</i> L. ssp. <i>hermaphroditum</i> (Lange ex Hagerup) Böcher	EMNIH	black crowberry	38	Empetraceae	Perennial	Shrub
<i>Equisetum arvense</i> L.	EQAR	field horsetail	31	Equisetaceae	Perennial	Forb
<i>Equisetum scirpoides</i> Michx.	EQSC	dwarf scouringrush	69	Equisetaceae	Perennial	Forb
<i>Equisetum sylvaticum</i> L.	EQSY	woodland horsetail	16	Equisetaceae	Perennial	Forb
<i>Erigeron</i> L.	ERIGE2	fleabane	3	Asteraceae	N/A	Forb
<i>Erigeron acris</i> L.	ERAC2	bitter fleabane	6	Asteraceae	Annual	Forb
<i>Eriophorum</i> L.	ERiop	cottongrass	3	Cyperaceae	Perennial	Graminoid
<i>Eriophorum vaginatum</i> L.	ERVA4	tussock cottongrass	6	Cyperaceae	Perennial	Graminoid
<i>Eritrichium nanum</i> (Vill.) Schrad. ex Gaudin	ERNA	arctic alpine forget-me-not	3	Boraginaceae	Perennial	Forb

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<i>Festuca</i> L.	FESTU	fescue	3	Poaceae	Perennial	Graminoid
<i>Flavocetraria cucullata</i> (Bellardi) Karnefelt & A. Thell	FLCU	N/A	34	Parmeliaceae	N/A	Lichen
Foliose lichen	FOLIO1	foliose lichen	3	N/A	N/A	Lichen
<i>Galium boreale</i> L.	GABO2	northern bedstraw	9	Rubiaceae	Perennial	Forb
<i>Geocaulon lividum</i> (Richardson) Fernald	GELI2	false toadflax	9	Santalaceae	Perennial	Forb
<i>Huperzia selago</i> (L.) Bernh. ex Schrank & Mart. var. <i>selago</i>	HUSES	fir clubmoss	3	Lycopodiaceae	Perennial	Forb
<i>Hylocomium splendens</i> (Hedw.) Schimp.	HYSP70	splendid feather moss	47	Hylocomiaceae	Perennial	Moss
<i>Icmadophila ericetorum</i> (L.) Zahlbr.	ICER	peppermint drop lichen	6	Baeomycetaceae	N/A	Lichen
<i>Ledum groenlandicum</i> Oeder	LEGR	bog Labrador tea	84	Ericaceae	Perennial	Shrub
<i>Ledum palustre</i> L. ssp. <i>decumbens</i> (Aiton) Hultén	LEPAD	marsh Labrador tea	6	Ericaceae	Perennial	Shrub
<i>Leymus innovatus</i> (Beal) Pilg.	LEIN6	downy ryegrass	3	Poaceae	Perennial	Graminoid
<i>Linnaea borealis</i> L.	LIBO3	twinline	28	Caprifoliaceae	Perennial	Forb
<i>Loiseleuria procumbens</i> (L.) Desv.	LOPR	alpine azalea	3	Ericaceae	Perennial	Shrub
<i>Lupinus arcticus</i> S. Watson	LUAR2	arctic lupine	13	Fabaceae	Perennial	Forb
<i>Luzula parviflora</i> (Ehrh.) Desv.	LUPA4	smallflowered woodrush	3	Juncaceae	Perennial	Graminoid
<i>Lycopodium annotinum</i> L.	LYAN2	stiff clubmoss	6	Lycopodiaceae	Perennial	Forb
<i>Lycopodium clavatum</i> L.	LYCL	running clubmoss	6	Lycopodiaceae	Perennial	Forb
<i>Masonhalea richardsonii</i> (Hook.) Karnefelt	MARI60	Richardson's masonhalea lichen	3	Parmeliaceae	N/A	Lichen
<i>Mertensia paniculata</i> (Aiton) G. Don	MEPA	tall bluebells	31	Boraginaceae	Perennial	Forb
<i>Moehringia lateriflora</i> (L.) Fenzl	MOLA6	bluntleaf sandwort	13	Caryophyllaceae	Perennial	Forb
<i>Myurella julacea</i> (Schwägr.) Schimp.	MYJU70	myurella moss	3	Pterigynandraceae	Perennial	Moss
<i>Orthilia secunda</i> (L.) House	ORSE	sidebells wintergreen	16	Pyrolaceae	Perennial	Shrub
<i>Parnassia palustris</i> L.	PAPA8	marsh grass of Parnassus	3	Saxifragaceae	Perennial	Forb
<i>Pedicularis</i> L.	PEDIC	lousewort	3	Scrophulariaceae	Perennial	Forb
<i>Pedicularis verticillata</i> L.	PEVE	whorled lousewort	3	Scrophulariaceae	Perennial	Forb
<i>Peltigera</i> Willd.	PELT12	felt lichen	84	Peltigeraceae	N/A	Lichen
<i>Peltigera aphthosa</i> (L.) Willd.	PEAP60	felt lichen	53	Peltigeraceae	N/A	Lichen
<i>Petasites frigidus</i> (L.) Fr.	PEFR5	arctic sweet coltsfoot	53	Asteraceae	Perennial	Forb
<i>Picea</i> A. Dietr.	PICEA	spruce	6	Pinaceae	Perennial	Tree
<i>Picea glauca</i> (Moench) Voss	PIGL	white spruce	38	Pinaceae	Perennial	Tree
<i>Picea mariana</i> (Mill.) Britton Sterns & Poggenb.	PIMA	black spruce	69	Pinaceae	Perennial	Tree
<i>Pleurozium schreberi</i> (Brid.) Mitt.	PLSC70	Schreber's big red stem moss	47	Hylocomiaceae	Perennial	Moss
<i>Poa</i> L.	POA	bluegrass	41	Poaceae	N/A	Graminoid
<i>Poa arctica</i> R. Br.	POAR2	arctic bluegrass	3	Poaceae	Perennial	Graminoid
<i>Polemonium</i> L.	POLEM	Jacob's-ladder	3	Polemoniaceae	Perennial	Forb
<i>Polygonum bistorta</i> L.	POBI5	meadow bistort	16	Polygonaceae	Perennial	Forb
<i>Polytrichum</i> Hedw.	POLYT5	polytrichum moss	97	Polytrichaceae	Perennial	Moss
<i>Polytrichum commune</i> Hedw.	POCO38	polytrichum moss	3	Polytrichaceae	Perennial	Moss
<i>Populus balsamifera</i> L.	POBA2	balsam poplar	9	Salicaceae	Perennial	Tree

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<i>Populus tremuloides</i> Michx.	POTR5	quaking aspen	44	Salicaceae	Perennial	Tree
<i>Ptilium</i> De Not.	PTIL3	ptilium moss	6	Hypnaceae	Perennial	Moss
<i>Pulsatilla patens</i> (L.) Mill.	PUPA5	eastern pasqueflower	3	Ranunculaceae	Perennial	Forb
<i>Pyrola grandiflora</i> Radius	PYGR	largeflowered wintergreen	13	Pyrolaceae	Perennial	Shrub
<i>Pyrola minor</i> L.	PYMI	snowline wintergreen	3	Pyrolaceae	Perennial	Shrub
<i>Ranunculus lapponicus</i> L.	RALA	Lapland buttercup	3	Ranunculaceae	Perennial	Forb
<i>Ribes hudsonianum</i> Richardson	RIHU	northern black currant	3	Grossulariaceae	Perennial	Shrub
<i>Rosa acicularis</i> Lindl.	ROAC	prickly rose	50	Rosaceae	Perennial	Shrub
<i>Rubus chamaemorus</i> L.	RUCH	cloudberry	31	Rosaceae	Perennial	Forb
<i>Rubus idaeus</i> L.	RUID	American red raspberry	3	Rosaceae	Perennial	Shrub
<i>Rumex</i> L.	RUMEX	dock	3	Polygonaceae	N/A	Forb
<i>Salix bebbiana</i> Sarg.	SABE2	Bebb willow	41	Salicaceae	Perennial	Tree, shrub
<i>Salix glauca</i> L.	SAGL	grayleaf willow	66	Salicaceae	Perennial	Tree, shrub
<i>Salix niphoclada</i> Rydb.	SANI10	barrenground willow	3	Salicaceae	Perennial	Shrub
<i>Salix pseudomonticola</i> C.R. Ball	SAPS	false mountain willow	6	Salicaceae	Perennial	Shrub
<i>Salix pulchra</i> Cham.	SAPU15	tealeaf willow	72	Salicaceae	Perennial	Shrub
<i>Salix scouleriana</i> Barratt ex Hook.	SASC	Scouler's willow	19	Salicaceae	Perennial	Tree, shrub
<i>Saussurea angustifolia</i> (Willd.) DC.	SAAN3	narrowleaf saw-wort	3	Asteraceae	Perennial	Forb
<i>Solidago multiradiata</i> Aiton	SOMU	Rocky Mountain goldenrod	13	Asteraceae	Perennial	Forb
<i>Sphagnum</i> L.	SPHAG2	sphagnum	44	Sphagnaceae	Perennial	Moss
<i>Spiraea stevenii</i> (C.K. Schneid.) Rydb.	SPST3	beauverd spirea	3	Rosaceae	Perennial	Shrub
<i>Stellaria longipes</i> Goldie	STLO2	longstalk starwort	6	Caryophyllaceae	Perennial	Forb
<i>Stereocaulon</i> Hoffm.	STERE2	snow lichen	3	Stereocaulaceae	N/A	Lichen
<i>Tephrosia atropurpurea</i> (Ledeb.) Holub	TEAT2	arctic groundsel	16	Asteraceae	Perennial	Forb
<i>Thuidium</i> Schimp.	THUID	thuidium moss	3	Thuidiaceae	Perennial	Moss
<i>Tomentypnum nitens</i> (Hedw.) Loeske	TONI70	tomentypnum moss	6	Brachytheciaceae	Perennial	Moss
Unknown crust lichen	CRUST	soil crust lichen	53	N/A	N/A	Lichen
Unknown forb	UNKSIL	Silene-like forb	3	Caryophyllaceae	N/A	Forb
Unknown fungus	FUNGI	fungus	94	N/A	N/A	Liverwort
Unknown graminoid	GRAM	grass	47	Poaceae	N/A	Graminoid
Unknown Marchantiophyta	LIVER	liverwort	13	N/A	N/A	Moss
Unknown moss	MOSSS1	small, short green-yellow carpet	38	N/A	N/A	Moss
Unknown moss	MOSS	N/A	25	N/A	N/A	Moss
Unknown moss	SMOSS	small moss	19	N/A	N/A	Moss
<i>Vaccinium cespitosum</i> Michx.	VACE	dwarf bilberry	9	Ericaceae	Perennial	Shrub
<i>Vaccinium oxycoccos</i> L.	VAOX	small cranberry	19	Ericaceae	Perennial	Shrub
<i>Vaccinium uliginosum</i> L.	VAUL	bog blueberry	75	Ericaceae	Perennial	Shrub
<i>Vaccinium vitis-idaea</i> L.	VAVI	lingonberry	97	Ericaceae	Perennial	Shrub
<i>Vulpicida pinastri</i> (Scop.) J.-E. Mattsson & M.J. Lai	VUPI	N/A	38	Parmeliaceae	N/A	Lichen
<i>Zigadenus elegans</i> Pursh	ZIEL2	mountain deathcamas	3	Liliaceae	Perennial	Forb